

Mr. Michael Haggerty
Heartland Aluminum, Inc.
P.O. Box 150
Warren, IN 46792

Re: 069-16566-00060
First Significant Revision to
FESOP 069-16225-00060

Dear Mr. Haggerty:

Heartland Aluminum, Inc. was issued a permit on November 25, 2002 for operation of a secondary metals reclamation facility. A letter requesting changes to this permit was received on December 9, 2002. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the construction and operation of one (1) aluminum sweat furnace.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Prior to start of operation, the following requirements should be met:
- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nishat Hydari, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call 973-575-2555 (ext. 3216) or 1-800-451-6027 press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
NH/EVP

cc: File - Huntington County
U.S. EPA, Region V
Huntington County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development
Technical Support and Modeling - Michelle Boner

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY**

**Heartland Aluminum, Inc.
706 East Ninth Street
Warren, Indiana 46792**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F069-16225-00060	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: November 25, 2002 Expiration Date: November 25, 2007
First Significant Permit Revision: FSPR 069-16566-00060	Pages Affected: 5, 6, 27 - 38
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 3, 2003

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a secondary metals reclamation operation.

Authorized individual:	Michael Haggerty
Source Address:	706 East Ninth Street, Warren, Indiana 46792
Mailing Address:	P.O. Box 150, Warren, Indiana 46792
SIC Code:	5093
Source Location Status:	Huntington
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) aluminum sweat furnace identified as AS-1000 with a maximum capacity of 0.70 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.0 MMBtu per hour; and a 0.4 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-01.
- (b) One (1) aluminum sweat furnace identified as AS-990 with a maximum capacity of 1.25 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 5.0 million (MM) British thermal units (BTU) per hour total, and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-02.
- (c) One (1) aluminum sweat furnace identified as AS-2002 with a maximum capacity of 0.7 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.5 MMBtu per hour; and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-03.

A.3 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION D.1 FACILITY OPERATION CONDITIONS

- (a) One (1) aluminum sweat furnace identified as AS-1000 with a maximum capacity of 0.70 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.0 MMBtu per hour; and a 0.4 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-01.
- (b) One (1) aluminum sweat furnace identified as AS-990 with a maximum capacity of 1.25 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 5.0 million (MM) British thermal units (BTU) per hour total, and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-02.
- (c) One (1) aluminum sweat furnace identified as AS-2002 with a maximum capacity of 0.7 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.5 MMBtu per hour; and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-03.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-7-10.5, WITH CONDITIONS LISTED BELOW.

General Construction Conditions

D.1.1 General Construction Condition

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.1.2 Effective Date of Permit

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.1.3 Construction Condition Applicability

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications pursuant to 326 IAC 2.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.4 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR Part 63, Subpart A)]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the sweat furnaces AS-990, AS-1000 and AS-2002, except as otherwise specified in 40 CFR 63, Subpart RRR.

D.1.5 Particulate Matter (PM) Emission Limitations [326 IAC 6-3-2]

The allowable PM emission rate from sweat furnaces AS-990, AS-1000 and AS-2002 shall not exceed 4.76, 3.23 and 3.23 pounds per hour, respectively.

D.1.6 PM10 Emission Limitations [326 IAC 2-1.1-11]

The allowable PM10 emission rate from sweat furnaces AS-990, AS-1000 and AS-2002 shall not exceed 4.76, 3.23 and 3.23 pounds per hour, respectively.

D.1.7 Sweat Furnace Dioxin/Furan Emission Limitations [63.1505(f)(2)]

The owner or operator shall not discharge or cause to be discharged to the atmosphere, dioxin/furan emissions from sweat furnaces AS-990, AS-1000 or AS-2002, in excess of 3.5×10^{-10} gr/dscf TEQ at eleven percent (11%) oxygen (O_2).

D.1.8 Sweat Furnace Operation [63.1506(a) and (h)], [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall operate sweat furnaces AS-990, AS-1000 and AS-2002 and their associated control equipment according to the requirements of Subpart RRR and this permit upon startup.

D.1.9 Afterburners [63.1505(f)(1)], [63.1512(f)], [63.1506(h)(1)], [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall design, install, operate and maintain afterburners at sweat furnaces AS-990, AS-1000 and AS-2002. Said afterburners shall be maintained such that the 3-hour block average operating temperature of each afterburner is at 1600 degrees Fahrenheit ($^{\circ}F$) or greater and the residence time is two seconds or greater.

Satisfying the requirements of this Condition shall be considered sufficient to demonstrate compliance with the sweat furnace dioxin/furan emission limits of Condition D.1.7. Thus, no initial or subsequent performance tests for the dioxin/furan limits of Condition D.1.7 shall be required.

D.1.10 Capture/Collection Systems [63.1510(d)(1)], [63.1506(c)(1),(2)] [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall design, install, operate, and maintain at sweat furnaces AS-990, AS-1000 and AS-2002, a system for the capture and collection of particulate matter, PM10, and dioxin/furan emissions. Said capture/collection systems shall:

- (a) meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice";
- (b) vent captured emissions through a closed system; and
- (c) be maintained such that each capture/control system operates at the parameter levels established in the required stack tests of Condition D.1.19 that achieves compliance with the PM limits of Condition D.1.5 and PM10 limits of Condition D.1.6.

D.1.11 Afterburner Temperature Monitoring Devices [63.1510(g)(1), (2)]

The owner or operator shall install an afterburner temperature continuous monitoring device at the exit of each afterburner's combustion zone. Said temperature monitoring devices shall have a recorder response range including zero and 1.5 times the average temperature established according to the requirements in Condition D.1.21, and shall be:

- (a) designed, installed, and calibrated according to the manufacturer's specifications;

- (b) maintained according to the manufacturer's instructions for short and long term maintenance, with each monitoring device operating parameter value or range being the value or range established during the performance evaluation required in Condition D.1.21; and
- (c) operated and maintained such that each monitoring system records the temperature in 15 minute block averages and determines and records the average temperature for each 3 hour block period;

with the reference method being a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

The owner or operator shall also meet all other applicable continuous monitoring system requirements of 40 CFR 63, Subpart A.

D.1.12 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

D.1.13 Operation, Maintenance, and Monitoring Plan [63.1510(b)], [326 IAC 2-1.1-11]

The owner or operator shall, for sweat furnaces AS-990, AS-1000 and AS-2002, prepare and implement a written operation, maintenance, and monitoring (OM&M) plan.

Said OM&M plan shall be implemented at startup, but need only be submitted to the Office of Air Quality (OAQ) for review and approval as part of the Part 70 or Part 71 permit application required to be submitted by December 9, 2005. Said OM&M plan shall include, at a minimum, the following information:

- (a) for each process and control device, the operating parameters to be monitored to determine compliance, and any applicable established operating levels or ranges;
- (b) a monitoring schedule for each sweat furnace;
- (c) a list of the procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits of Conditions D.1.5, D.1.6, and D.1.7;
- (d) a list of the procedures for the proper operation and maintenance of the monitoring devices or systems used to determine compliance, including:
 - (1) the procedures for calibration and certification of accuracy of each monitoring device, at least once every 6 months, or according to the manufacturer's instructions; and
 - (2) the procedures for the quality control and quality assurance of the required continuous emission monitoring system(s) as required by the general provisions in 40 CFR 63, Subpart A;
- (e) a list of the procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used to determine feed/charge (or throughput) weight if a measurement device is not used;

- (f) a list of the corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Part (a) of this Condition, including:
 - (1) the procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) the procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed; and
- (g) a maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

All subsequent proposed changes to the plan shall be submitted to the Office of Air Quality (OAQ) for review and approval, and shall include, at a minimum, the most recent updated information requested in (a) through (g) of this condition. Pending approval by the OAQ of an initial or amended plan, the owner or operator shall comply with the provisions of the most recent existing approved plan.

D.1.14 Startup, Shutdown, and Malfunction (SSM) Plan [63.1516(a)]

The owner or operator shall develop and implement a written Startup, Shutdown, and Malfunction plan as described in Sec. 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard.

In addition to the information required in 63.6(e)(3), the plan shall include:

- (a) procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
- (b) corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

The SSM plan shall be included as part of the OM&M plan required in Condition D.1.13.

D.1.15 Corrective Action for 40 CFR 63, Subpart RRR [63.1506(p)]

When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established and incorporated in the OM&M plan, the owner or operator shall initiate corrective action.

The corrective action taken, shall restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

Compliance Determination Requirements

D.1.16 Afterburners [63.1506(h)(2)]

The owner or operator shall operate the afterburners of sweat furnaces AS-990, AS-1000 and AS-2002 at all times the respective sweat furnaces are in operation, in accordance with the OM&M plan.

D.1.17 Capture/Collection Systems [63.1506(c)(3)]

The owner or operator shall operate the capture/control systems at all times the respective sweat furnaces are in operation, according to the procedures and requirements in the OM&M plan.

D.1.18 Monitoring Devices [63.1510(g)]

The owner or operator shall operate the monitoring devices at all times the respective sweat furnaces are in operation, according to the procedures and requirements in the OM&M plan.

D.1.19 PM/PM10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)]

During the period between 60 and 180 days after issuance of this permit, in order to determine compliance with Conditions C.1, D.1.5, and D.1.6, the owner or operator shall perform PM and PM-10 testing utilizing methods as approved by the Office of Air Quality. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.20 Additional Equation for Determining Compliance [63.1513(d)]

The owner or operator shall use the following equation, as applicable, to determine compliance with the limit of Condition D.1.7.

For conversion of gr/dscf or lb/ton to gr TEQ/dscf or lb TEQ/ton, respectively, the owner or operator shall use the procedures and equation in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016), available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, NTIS no. PB-145756.

D.1.21 Performance Evaluation [63.1512(m)], [326 IAC 2-8-5(a)(1), (4)]

Prior to the initial performance test, the owner or operator shall:

- (a) conduct a performance evaluation for each temperature monitoring device according to the requirements of 63.8; and
- (b) use the following procedures to establish an operating parameter value or range for the required afterburner operating temperature:
 - (1) continuously measure and record the operating temperature of each afterburner every fifteen (15) minutes during the THC and D/F performance tests,
 - (2) determine and record the fifteen (15) minute block average temperatures for the three test runs, and
 - (3) determine and record the 3-hour block average temperature measurements for the 3 test runs.

These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.22 Afterburners [63.1510(g)(3)]

The owner or operator shall, for the afterburners of sweat furnaces AS-990, AS-1000 and AS-2002, conduct an inspection of each afterburner at least once a year and record the results, with each inspection including, at a minimum:

- (a) inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
- (b) inspection for proper adjustment of combustion air;
- (c) inspection of internal structures (e.g., baffles) to ensure structural integrity;
- (d) inspection of dampers, fans, and blowers for proper operation;
- (e) inspection for proper sealing;
- (f) inspection of motors for proper operation;
- (g) inspection of combustion chamber refractory lining and clean and replace lining as necessary;
- (h) inspection of afterburner shell for corrosion and/or hot spots;
- (i) documentation verifying that, for the burn cycle following the inspection, the afterburner is operating properly and all necessary adjustments have been made; and
- (j) verification that the equipment is maintained in good operating condition.

Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

D.1.23 Capture/Collection System [63.1510(d)(2)]

The owner or operator shall, for sweat furnaces AS-990, AS-1000 and AS-2002, inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in Conditions D.1.10 and D.1.17, and record the results of each inspection.

D.1.24 Monitoring Devices [63.1510(g)]

The owner or operator shall:

- (a) continuously monitor and record the operating afterburner temperature of each respective afterburner in 15 minute block averages and determine and record the average temperature for each 3 hour block period; and
- (b) calibrate each afterburner monitoring device, as necessary, according to the manufacturer's specifications referenced in Condition D.1.11(a).

D.1.25 Visible Emissions Notations

- (a) Daily visible emission notations of sweat furnaces AS-990, AS-1000 and AS-2002 stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.1.26 Alternate Monitoring Methods [63.1510(w)]

- (a) The owner or operator may, for sweat furnaces AS-990, AS-1000 and AS-2002, submit to the United States (U.S.) Environmental Protection Agency (EPA), Region V, an application for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of Subpart RRR, provided the owner or operator:
 - (1) continues to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure,
 - (2) submits an application for approval of alternate monitoring methods no later than the notification of the performance test, with said application containing:
 - (A) data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach,
 - (B) a description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated, and
 - (C) data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s), and
 - (3) submits all required supporting information in a timely manner to the U.S. EPA, Region V, to allow sufficient consideration of the application. Neither submittal of an application nor the U.S. EPA, Region V's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provisions of Subpart RRR.
- (b) Upon receipt of the alternative monitoring plan application, the U.S. EPA, Region V, shall review the alternate monitoring application as follows:

- (1) No averaging periods other than those specified in Section 63.1510 shall be approved.
- (2) The alternate monitoring application shall only be approved if it is determined that the alternate monitoring plan provides equivalent or better assurance of compliance with the relevant emission standard(s).
- (3) Before disapproving any alternate monitoring application, the U.S. EPA, Region V, shall provide notice of:
 - (A) the information and findings upon which the intended disapproval is based, and
 - (B) an opportunity for the owner or operator to present additional supporting information before final action is taken on the application. Said notice shall specify how much additional time is allowed for the owner or operator to provide additional supporting information.

The U.S. EPA, Region V, reserves the authority to, at any time on a case-by-case basis, require additional or alternative operating limits, or alternative approaches to establishing operating limits, as deemed necessary to ensure that compliance with the emission standards of this subpart is demonstrated.

Notification, Record Keeping, and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.27 Notifications [63.1515], [63.1512(s)]

The owner or operator shall submit the following notifications:

(a) Initial Notifications:

The owner or operator shall submit initial notifications to the Office of Air Quality as follows:

- (1) As required by 63.9(b)(1), the owner or operator shall notify the Office of Air Quality of any existing minor source that is modified such that it becomes a major source subject to Subpart RRR.
- (2) As required by 63.9(b)(3), the owner or operator shall notify the Office of Air Quality of any new minor affected source, reconstructed affected source, or source that has been reconstructed such that it becomes an affected source for which an application for approval of construction or reconstruction is not required under 63.5(d), must provide notification include a statement that the source is subject to any standard under Subpart RRR.
- (3) As required by 63.9(b)(4), the owner or operator shall, for any new major affected source or reconstructed major affected source for which an application for approval of construction or reconstruction is required by 63.5(d) must, provide the following notifications:
 - (A) notification of intention to construct a new major affected source, reconstruct a major source, or reconstruct a major source such that the source becomes a major affected source,

- (B) notification of the date when construction or reconstruction was commenced (submitted simultaneously with the application for approval of construction or reconstruction if construction was commenced before the effective date of Subpart RRR, or no later than 30 days after the date construction or reconstruction commenced),
 - (C) notification of the anticipated date of startup, and
 - (D) notification of the actual date of startup.
- (4) As required by 63.9(b)(5), any owner or operator who intends to construct a new affected source or reconstruct an affected source subject to Subpart RRR, or reconstruct a source such that it becomes an affected source subject to Subpart RRR, shall provide notification of the intended construction or reconstruction. Said notification shall include all the information required for an application for approval of construction or reconstruction, as required by 63.5(d).

For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.

Said application shall be submitted as follows:

- (A) the application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence, but no sooner than the effective date of Subpart RRR if the construction or reconstruction commences after the effective date of Subpart RRR, or
 - (B) the application shall be submitted as soon as practicable before startup but no later than 90 days after the effective date of Subpart RRR if the construction or reconstruction had commenced and initial startup had not occurred before the effective date.
- (5) As required by 63.9(d), the owner or operator shall provide notification of any special compliance obligations for a new source.
- (6) As required by 63.9(e) and (f), the owner or operator shall, if required, provide notification to the Office of Air Quality, of the anticipated date for conducting performance tests and visible emission observations. Notification of the intent to conduct a performance test shall be submitted at least 60 days before the performance test is scheduled. Notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.
- (7) As required by 63.9(g), the owner or operator shall provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.

(b) Notification of Compliance Status Report:

The owner or operator shall submit a notification of compliance status report to the Office of Air Quality and US EPA, Region V within 60 days of startup. Said notification of compliance status report shall include the information specified in this Condition, and shall be signed by the responsible official who shall certify its accuracy.

The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination.

For the notification of compliance status report to be deemed complete, the owner or operator shall submit the following information:

- (1) the approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).
- (2) the compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
- (3) design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in Conditions D.1.10 and D.1.17.
- (4) manufacturer's specification or analysis documenting the design residence time of no less than 2 seconds and design operating temperature of no less than 1600 °F for the afterburners of sweat furnaces AS-990, AS-1000 and AS-2002.
- (5) approved OM&M plan.
- (6) startup, shutdown, and malfunction plan, with revisions.

If the information specified in (b)(1) through (b)(6) above is submitted at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted.

Record Keeping Requirements

D.1.28 Record Keeping for 40 CFR 63, Subpart RRR [63.1517]

The owner or operator shall keep records as follows:

- (a) As required by Sec. 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
 - (1) The owner or operator shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site,

- (2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche, and
- (3) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

Should any general record keeping requirement(s) of this condition conflict with any general record keeping requirements of Condition C.20, the owner or operator shall comply with the more stringent applicable requirement(s).

- (b) In addition to the general records required by Sec. 63.10(b), the owner or operator shall maintain records of:

- (1) For sweat furnace AS-990, AS-1000 and AS-2002 afterburners:
 - (A) Records of the 15-minute block average afterburner operating temperature recorded in Condition D.1.24(a), including any period when the temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken, and
 - (B) Records of results of the annual afterburner inspections required in Condition D.1.22.
- (2) For each continuous monitoring system, records required by Sec. 63.10(c).
- (3) Records of annual inspections of emission capture/collection and closed vent systems.
- (4) Records for any approved alternative monitoring or test procedure.
- (5) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (A) Startup, shutdown, and malfunction plan as specified in 63.10(b), and
 - (B) For major sources, the OM&M plan.

D.1.29 Particulate Matter (PM) and PM10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.25, the owner or operator shall maintain records of daily visible emission notations of the AS-990, AS1000 and AS-2002 stack exhaust.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Should any general record keeping requirement(s) of this condition conflict with any general record keeping requirements of Condition C.20, the owner or operator shall comply with the more stringent applicable requirement(s).

Reporting Requirements

D.1.30 Reporting Requirements for 40 CFR 63, Subpart RRR [63.1516(b)]

The owner or operator shall submit the following reports:

(a) Excess Emissions/Summary Report:

As required by Sec. 63.10(e)(3), the owner or operator shall submit semiannual reports within 60 days after the end of each 6-month period. Each report shall contain the information specified in Sec. 63.10(c). When no deviations of parameters have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

A report shall be submitted if any of these conditions occur during a 6-month reporting period:

- (1) an excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter),
- (2) an action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in Sec. 63.6(e)(3), and
- (3) any period of time when sweat furnace AS-990, AS-1000 or AS-2002 was not operated according to the requirements of 40 CFR 63, Subpart RRR.

(b) Annual Compliance Certifications:

For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the owner or operator shall certify continuing compliance based upon, but not limited to, the following conditions:

- (1) Any period of excess emissions, as defined in (a) of this Condition, that occurred during the year were reported as required by Subpart RRR, and
- (2) All monitoring, recordkeeping, and reporting requirements were met during the year.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	Heartland Aluminum, Inc.
Source Location:	706 East Ninth Street, Warren, IN 46792
County:	Huntington
SIC Code:	5093
Operation Permit No.:	FESOP 069-16225-00060
Operation Permit Issuance Date:	November 25, 2002
Significant Permit Revision No.:	069-16566-00060
Permit Reviewer:	NH/EVP

The Office of Air Quality (OAQ) has reviewed a revision application from Heartland Aluminum, Inc., relating to the operation of secondary metals reclamation facility.

History

On December 9, 2002, Heartland Aluminum, Inc., submitted an application to the OAQ requesting to add an additional aluminum sweat furnace to their existing plant. Heartland Aluminum, Inc. was issued a FESOP 069-16225-00060 on November 25, 2002.

New Emission Units and Pollution Control Equipment

One (1) aluminum sweat furnace identified as AS-2002 with a maximum capacity of 0.7 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.5 MMBtu per hour; and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-03.

Existing Approvals

The source was issued a FESOP (F069-16225-00060) on November 25, 2002.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 9, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 3).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Pollutant	Potential To Emit (tons/year)
PM	44.50
PM-10	40.93
SO ₂	10.74
VOC	7.47
CO	1.66
NO _x	3.81

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Benzene	negligible
Dichlorobenzene	negligible
Formaldehyde	negligible
Hexane	0.04
Toluene	negligible
Lead	negligible
Cadmium	negligible
Chromium	negligible
Manganese	negligible
Nickel	negligible
TOTAL	0.04

Justification for Modification

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 is greater than 25 tons per year. Therefore, the FESOP source is being modified through a FESOP Significant Permit Revision. This modification is being performed pursuant to 326 IAC 2.8-11.1(f)(1)(E)(i).

Limited Potential to Emit of Modification after Issuance

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	HAPs
Aluminum Sweat Furnace, AS-2002	0.98	0.90	10.73	0.18	--	1.84	--	--
Natural gas combustion*	0.04	0.15	0.01	0.11	1.66	1.97	0.04 (Hexane)	0.04
Total Emissions	1.02	1.05	10.74	0.29	1.66	3.81	0.04	0.04

* Natural gas combustion units consist of a sweating furnace consisting of 2.0 MMBtu/hr and 1.5 MMBtu/hr primary & secondary chambers, respectively, and 1.0 MMBtu/hr thermal afterburner.

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Limited Potential to Emit of Entire Source

	Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	HAPs
Existing emission units (AS-990, AS-1000 and natural gas combustion units)	4.03	3.65	22.96	0.27	1.65	8.97	neg.	neg.
New emission units (AS-2002 and natural gas combustion units)	1.02	1.05	10.74	0.29	1.66	3.81	0.04	0.04
Total Emissions	5.05	4.70	33.70	0.56	3.31	12.78	0.04	0.04

The potential to emit PM and PM10 of this source (which includes existing and new emission units) is less than 100 tons per year. Therefore, this source will still maintain its FESOP status.

County Attainment Status

The source is located in Huntington County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC are considered when evaluating the rule applicability relating to the ozone standards. Huntington County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) The proposed modification is not subject to the requirements of 40 CFR 60, Subpart S, "Standards of Performance for Primary Aluminum Reduction Plants", because the source does not perform primary aluminum reduction as defined in 40 CFR 60.191.
- (b) The one (1) aluminum sweat furnace, identified as AS-2002, is subject to 40 CFR 63, Subpart RRR because the proposed furnace is an affected area source as defined in 63.1500(c)(3), and the furnace does not qualify for any of the exemptions under Section 63.1500(d) and (e).

Pursuant to 40 CFR 63, Subpart RRR, Section 63.1501, the owner or operator shall achieve compliance with the requirements of Subpart RRR by the following dates:

Aluminum sweat furnace AS-2002: upon startup.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Huntington County and the federally enforceable limited potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4, the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the one (1) aluminum sweat furnace (AS-2002) will emit less than 10 tons per year of a single HAP and 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) aluminum sweat furnace (AS-2002) shall not exceed 3.23 pounds per hour when operating at a process weight rate of 0.7 tons per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The thermal afterburner shall be in operation at all times the one (1) aluminum sweat furnace (AS-2002) is in operation, in order to comply with this limit.

326 IAC 8-1-6 (New Facilities; General VOC Reduction Requirements)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have a PTE VOC at 25 tons per year or more, and which are not otherwise regulated by another provision of Article 8. The proposed modification does not consist of any facility with a PTE VOC at 25 tons per year or more. Thus, 326 IAC 8-1-6 does not apply.

326 IAC 9-1-2 (Carbon Monoxide Emission Limits)

This rule limits the carbon monoxide emissions from all stationary sources commencing operation after March 21, 1972. This rule includes sources of ferrous smelters and refuse incineration and burning equipment. The proposed aluminum sweat furnace is not a ferrous metal smelter, nor is the facility used for refuse incineration or burning. Therefore, 326 IAC 9-1-2 does not apply.

326 IAC 11-5-1 (Fluoride Emission Limitations for Existing Primary Aluminum Plants)

Pursuant to 326 IAC 11-5-1 (Applicability), the requirements of this rule apply to primary aluminum plants in operation on or before January 26, 1976. The source is a secondary aluminum processing plant. Therefore, 326 IAC 11-5-1 does not apply.

Testing Requirements

The sweat furnace is subject to 40 CFR 63, Subpart RRR which requires the owner or operator to comply with a dioxin/furan emission limit of 3.5×10^{-10} gr/dscf TEQ at eleven percent (11%) oxygen (O_2). However, the NESHAP exempts the source from compliance stack tests provided the source installs afterburners at each furnace, operates each afterburner at 1600°F, and achieve a required residence time of 2 seconds for each afterburner.

Heartland aluminum will install an afterburner at the sweat furnace. The design residence time will be 2 seconds, and the afterburners will be operated at 1600°F. Therefore, no stack tests for dioxin/furan emission shall be required.

The source unrestricted potential to emit of particulate matter (PM) exceed 40 tons/yr. In addition, sweat furnace AS-2002 is subject to 326 IAC 6-3-2 hourly limits of 3.23 pounds per hour.

Since the unrestricted PM emissions are less than the major source threshold of 100 tons/yr, no PM testing is required to establish the annual emission rate. However, since the source's unrestricted potential to emit is greater than 40 tons/yr, stack testing for PM shall be required to demonstrate compliance with the 326 IAC 6-3-2 limit.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Although the source Title V permit has not been issued, the source is considered subject to the Part 70 requirements under a permit shield. Thus, a determination has to be made as to whether or not compliance monitoring is required of the proposed modification.

State Compliance Monitoring Requirements:

The PM₁₀ emissions of sweat furnace AS-2002 are limited to less than the Part 70 thresholds allowing the source to defer submitting a Title V application to December 9, 2005 which is considered accepting a limit such that an applicable requirement becomes not applicable.

Thus, state compliance monitoring shall be required for sweat furnace AS-2002. Compliance monitoring for sweat furnace AS-2002 shall consist of performing daily visible emissions.

Federal Compliance Monitoring Requirements:

While 40 CFR 63, Subpart RRR does not have any applicable requirements for any of the applicable pollutants (PM, SO₂, or VOC), the NESHAP does have compliance monitoring requirements associated with the afterburners used to comply with the dioxin/furan limit under Section 63.1505(f) of the rule.

Pursuant to 40 CFR 63, Subpart RRR, there are compliance monitoring requirements for the afterburners, the emissions capture/control systems, the afterburner temperature monitoring devices, and the miscellaneous requirements of placing informative labels at sweat furnaces AS-990 and AS-1000 and utilizing only clean charge and non-reactive fluxes.

The following is a list of the federal compliance monitoring requirements:

- (a) Afterburners: annual inspections of each afterburner.
- (b) Capture/Collection Systems: annual inspections of each capture/collection and closed vent system.

- | | |
|-------------------------------|---|
| (c) Monitoring Devices: | continuous monitoring and recording of the afterburner temperature and inspection and calibration of each monitoring device every 6 months. |
| (d) Labeling Requirements: | monthly inspections of the labels. |
| (e) Charge/Flux Requirements: | recording the materials charged at each sweat furnace. |

Changes Proposed

- 1) The proposed one (1) aluminum sweat furnace will be added to Section A.2.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) aluminum sweat furnace identified as AS-1000 with a maximum capacity of 0.70 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.0 MMBtu per hour; and a 0.4 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-01.
 - (b) One (1) aluminum sweat furnace identified as AS-990 with a maximum capacity of 1.25 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 5.0 million (MM) British thermal units (BTU) per hour total, and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-02.
 - (c) **One (1) aluminum sweat furnace identified as AS-2002 with a maximum capacity of 0.7 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.5 MMBtu per hour; and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-03.**
- 2) The proposed one (1) aluminum sweat furnace will be added to the facility description box in Section D.1.

SECTION D.1 FACILITY OPERATION CONDITIONS

- (a) One (1) aluminum sweat furnace identified as AS-1000 with a maximum capacity of 0.70 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour total; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.0 MMBtu per hour; and a 0.4 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-01.
- (b) One (1) aluminum sweat furnace identified as AS-990 with a maximum capacity of 1.25 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 5.0 million (MM) British thermal units (BTU) per hour total, and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-02.
- (c) **One (1) aluminum sweat furnace identified as AS-2002 with a maximum capacity of 0.7 tons of scrap metal processed per hour. The furnace is equipped with a primary metal melting chamber utilizing a natural gas fired burner rated at 2.0 million (MM) British thermal units (Btu) per hour; a secondary molten metal holding chamber utilizing a natural gas fired burner rated at 1.5 MMBtu per hour; and a 1.0 MMBtu per hour natural gas fired thermal afterburner utilized for particulate matter and volatile organic compound control exhausting at one (1) stack identified as EP-03.**

- 3) The following conditions in Section D.1 will be revised to include the one (1) aluminum sweat furnace (AS-2002).

D.1.4 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**, except as otherwise specified in 40 CFR 63, Subpart RRR.

D.1.5 Particulate Matter (PM) Emission Limitations [326 IAC 6-3-2]

The allowable PM emission rate from sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002** shall not exceed 4.76, ~~and~~ 3.23 **and 3.23** pounds per hour, respectively.

D.1.6 PM10 Emission Limitations [326 IAC 2-1.1-11]

The allowable PM10 emission rate from sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002** shall not exceed 4.76, ~~and~~ 3.23 **and 3.23** pounds per hour, respectively.

D.1.7 Sweat Furnace Dioxin/Furan Emission Limitations [63.1505(f)(2)]

The owner or operator shall not discharge or cause to be discharged to the atmosphere, dioxin/furan emissions from sweat furnaces AS-990, ~~or~~ AS-1000 **or AS-2002**, in excess of 3.5×10^{-10} gr/dscf TEQ at eleven percent (11%) oxygen (O_2).

D.1.8 Sweat Furnace Operation [63.1506(a) and (h)], [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall operate sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002** and their associated control equipment according to the requirements of Subpart RRR and this permit upon startup.

D.1.9 Afterburners [63.1505(f)(1)], [63.1512(f)], [63.1506(h)(1)], [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall design, install, operate and maintain afterburners at sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**. Said afterburners shall be maintained such that the 3-hour block average operating temperature of each afterburner is at 1600 degrees Fahrenheit ($^{\circ}F$) or greater and the residence time is two seconds or greater.

Satisfying the requirements of this Condition shall be considered sufficient to demonstrate compliance with the sweat furnace dioxin/furan emission limits of Condition D.1.7. Thus, no initial or subsequent performance tests for the dioxin/furan limits of Condition D.1.7 shall be required.

D.1.10 Capture/Collection Systems [63.1510(d)(1)], [63.1506(c)(1),(2)] [326 IAC 2-1.1-11], [326 IAC 6-3-2]

The owner or operator shall design, install, operate, and maintain at sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**, a system for the capture and collection of particulate matter, PM10, and dioxin/furan emissions. Said capture/collection systems shall:

- (a) meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice";
- (b) vent captured emissions through a closed system; and
- (c) be maintained such that each capture/control system operates at the parameter levels established in the required stack tests of Condition D.1.19 that achieves compliance with the PM limits of Condition D.1.5 and PM10 limits of Condition D.1.6.

D.1.13 Operation, Maintenance, and Monitoring Plan [63.1510(b)], [326 IAC 2-1.1-11]

The owner or operator shall, for sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**, prepare and implement a written operation, maintenance, and monitoring (OM&M) plan.

Said OM&M plan shall be implemented at startup, but need only be submitted to the Office of Air Quality (OAQ) for review and approval as part of the Part 70 or Part 71 permit application required to be submitted by December 9, 2005. Said OM&M plan shall include, at a minimum, the following information:

- (a) for each process and control device, the operating parameters to be monitored to determine compliance, and any applicable established operating levels or ranges;
- (b) a monitoring schedule for each sweat furnace;
- (c) a list of the procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits of Conditions D.1.5, D.1.6, and D.1.7;
- (d) a list of the procedures for the proper operation and maintenance of the monitoring devices or systems used to determine compliance, including:
 - (1) the procedures for calibration and certification of accuracy of each monitoring device, at least once every 6 months, or according to the manufacturer's instructions; and
 - (2) the procedures for the quality control and quality assurance of the required continuous emission monitoring system(s) as required by the general provisions in 40 CFR 63, Subpart A;
- (e) a list of the procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used to determine feed/charge (or throughput) weight if a measurement device is not used;
- (f) a list of the corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in Part (a) of this Condition, including:
 - (1) the procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

- (2) the procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed; and
- (g) a maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

All subsequent proposed changes to the plan shall be submitted to the Office of Air Quality (OAQ) for review and approval, and shall include, at a minimum, the most recent updated information requested in (a) through (g) of this condition. Pending approval by the OAQ of an initial or amended plan, the owner or operator shall comply with the provisions of the most recent existing approved plan.

D.1.16 Afterburners [63.1506(h)(2)]

The owner or operator shall operate the afterburners of sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002** at all times the respective sweat furnaces are in operation, in accordance with the OM&M plan.

D.1.22 Afterburners [63.1510(g)(3)]

The owner or operator shall, for the afterburners of sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**, conduct an inspection of each afterburner at least once a year and record the results, with each inspection including, at a minimum:

- (a) inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
- (b) inspection for proper adjustment of combustion air;
- (c) inspection of internal structures (e.g., baffles) to ensure structural integrity;
- (d) inspection of dampers, fans, and blowers for proper operation;
- (e) inspection for proper sealing;
- (f) inspection of motors for proper operation;
- (g) inspection of combustion chamber refractory lining and clean and replace lining as necessary;
- (h) inspection of afterburner shell for corrosion and/or hot spots;
- (i) documentation verifying that, for the burn cycle following the inspection, the afterburner is operating properly and all necessary adjustments have been made; and
- (j) verification that the equipment is maintained in good operating condition.

Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

D.1.23 Capture/Collection System [63.1510(d)(2)]

The owner or operator shall, for sweat furnaces AS-990, ~~and~~ AS-1000 **and AS-2002**, inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in Conditions D.1.10 and D.1.17, and record the results of each inspection.

D.1.25 Visible Emissions Notations

- (a) Daily visible emission notations of sweat furnaces AS-990, ~~and AS-1000~~ **and AS-2002** stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.1.26 Alternate Monitoring Methods [63.1510(w)]

- (a) The owner or operator may, for sweat furnaces AS-990, ~~and AS-1000~~ **and AS-2002**, submit to the United States (U.S.) Environmental Protection Agency (EPA), Region V, an application for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of Subpart RRR, provided the owner or operator:
 - (1) continues to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure,
 - (2) submits an application for approval of alternate monitoring methods no later than the notification of the performance test, with said application containing:
 - (A) data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach,
 - (B) a description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated, and
 - (C) data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s), and
 - (3) submits all required supporting information in a timely manner to the U.S. EPA, Region V, to allow sufficient consideration of the application. Neither submittal of an application nor the U.S. EPA, Region V's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provisions of Subpart RRR.
- (b) Upon receipt of the alternative monitoring plan application, the U.S. EPA, Region V, shall review the alternate monitoring application as follows:
 - (1) No averaging periods other than those specified in Section 63.1510 shall be approved.
 - (2) The alternate monitoring application shall only be approved if it is determined that the alternate monitoring plan provides equivalent or better assurance of compliance with the relevant emission standard(s).

- (3) Before disapproving any alternate monitoring application, the U.S. EPA, Region V, shall provide notice of:
 - (A) the information and findings upon which the intended disapproval is based, and
 - (B) an opportunity for the owner or operator to present additional supporting information before final action is taken on the application. Said notice shall specify how much additional time is allowed for the owner or operator to provide additional supporting information.

The U.S. EPA, Region V, reserves the authority to, at any time on a case-by-case basis, require additional or alternative operating limits, or alternative approaches to establishing operating limits, as deemed necessary to ensure that compliance with the emission standards of this subpart is demonstrated.

D.1.27 Notifications [63.1515], [63.1512(s)]

The owner or operator shall submit the following notifications:

(a) Initial Notifications:

The owner or operator shall submit initial notifications to the Office of Air Quality as follows:

- (1) As required by 63.9(b)(1), the owner or operator shall notify the Office of Air Quality of any existing minor source that is modified such that it becomes a major source subject to Subpart RRR.
- (2) As required by 63.9(b)(3), the owner or operator shall notify the Office of Air Quality of any new minor affected source, reconstructed affected source, or source that has been reconstructed such that it becomes an affected source for which an application for approval of construction or reconstruction is not required under 63.5(d), must provide notification include a statement that the source is subject to any standard under Subpart RRR.
- (3) As required by 63.9(b)(4), the owner or operator shall, for any new major affected source or reconstructed major affected source for which an application for approval of construction or reconstruction is required by 63.5(d) must, provide the following notifications:
 - (A) notification of intention to construct a new major affected source, reconstruct a major source, or reconstruct a major source such that the source becomes a major affected source,
 - (B) notification of the date when construction or reconstruction was commenced (submitted simultaneously with the application for approval of construction or reconstruction if construction was commenced before the effective date of Subpart RRR, or no later than 30 days after the date construction or reconstruction commenced),
 - (C) notification of the anticipated date of startup, and
 - (D) notification of the actual date of startup.

- (4) As required by 63.9(b)(5), any owner or operator who intends to construct a new affected source or reconstruct an affected source subject to Subpart RRR, or reconstruct a source such that it becomes an affected source subject to Subpart RRR, shall provide notification of the intended construction or reconstruction. Said notification shall include all the information required for an application for approval of construction or reconstruction, as required by 63.5(d).

For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.

Said application shall be submitted as follows:

- (A) the application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence, but no sooner than the effective date of Subpart RRR if the construction or reconstruction commences after the effective date of Subpart RRR, or
 - (B) the application shall be submitted as soon as practicable before startup but no later than 90 days after the effective date of Subpart RRR if the construction or reconstruction had commenced and initial startup had not occurred before the effective date.
- (5) As required by 63.9(d), the owner or operator shall provide notification of any special compliance obligations for a new source.
 - (6) As required by 63.9(e) and (f), the owner or operator shall, if required, provide notification to the Office of Air Quality, of the anticipated date for conducting performance tests and visible emission observations. Notification of the intent to conduct a performance test shall be submitted at least 60 days before the performance test is scheduled. Notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.
 - (7) As required by 63.9(g), the owner or operator shall provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.

(b) Notification of Compliance Status Report:

The owner or operator shall submit a notification of compliance status report to the Office of Air Quality and US EPA, Region V within 60 days of startup. Said notification of compliance status report shall include the information specified in this Condition, and shall be signed by the responsible official who shall certify its accuracy.

The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination.

For the notification of compliance status report to be deemed complete, the owner or operator shall submit the following information:

- (1) the approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).

- (2) the compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
- (3) design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in Conditions D.1.10 and D.1.17.
- (4) manufacturer's specification or analysis documenting the design residence time of no less than 2 seconds and design operating temperature of no less than 1600 °F for the afterburners of sweat furnaces AS-990, ~~and AS-1000~~ **and AS-2002**.
- (5) approved OM&M plan.
- (6) startup, shutdown, and malfunction plan, with revisions.

If the information specified in (b)(1) through (b)(6) above is submitted at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted.

D.1.28 Record Keeping for 40 CFR 63, Subpart RRR [63.1517]

The owner or operator shall keep records as follows:

- (a) As required by Sec. 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
 - (1) The owner or operator shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site,
 - (2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche, and
 - (3) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

Should any general record keeping requirement(s) of this condition conflict with any general record keeping requirements of Condition C.20, the owner or operator shall comply with the more stringent applicable requirement(s).
- (b) In addition to the general records required by Sec. 63.10(b), the owner or operator shall maintain records of:
 - (1) For sweat furnace AS-990, ~~and AS-1000~~ **and AS-2002** afterburners:
 - (A) Records of the 15-minute block average afterburner operating temperature recorded in Condition D.1.24(a), including any period when the temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken, and
 - (B) Records of results of the annual afterburner inspections required in Condition D.1.22.
 - (2) For each continuous monitoring system, records required by Sec. 63.10(c).
 - (3) Records of annual inspections of emission capture/collection and closed vent systems.

- (4) Records for any approved alternative monitoring or test procedure.
- (5) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (A) Startup, shutdown, and malfunction plan as specified in 63.10(b), and
 - (B) For major sources, the OM&M plan.

D.1.29 Particulate Matter (PM) and PM10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.25, the owner or operator shall maintain records of daily visible emission notations of the AS-990, ~~and AS1000~~ **and AS-2002** stack exhaust.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Should any general record keeping requirement(s) of this condition conflict with any general record keeping requirements of Condition C.20, the owner or operator shall comply with the more stringent applicable requirement(s).

D.1.30 Reporting Requirements for 40 CFR 63, Subpart RRR [63.1516(b)]

The owner or operator shall submit the following reports:

- (a) Excess Emissions/Summary Report:

As required by Sec. 63.10(e)(3), the owner or operator shall submit semiannual reports within 60 days after the end of each 6-month period. Each report shall contain the information specified in Sec. 63.10(c). When no deviations of parameters have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

A report shall be submitted if any of these conditions occur during a 6-month reporting period:

- (1) an excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter),
- (2) an action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in Sec. 63.6(e)(3), and
- (3) any period of time when sweat furnace AS-990, ~~or AS-1000~~ **or AS-2002** was not operated according to the requirements of 40 CFR 63, Subpart RRR.

- (b) Annual Compliance Certifications:

For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the owner or operator shall certify continuing compliance based upon, but not limited to, the following conditions:

- (1) Any period of excess emissions, as defined in (a) of this Condition, that occurred during the year were reported as required by Subpart RRR, and
- (2) All monitoring, recordkeeping, and reporting requirements were met during the year.

Conclusion

This permit revision shall be subject to the conditions of the attached proposed **Significant Permit Revision for a Federally Enforceable State Operating Permit No.: F069-16566-00060.**

**Appendix A: Secondary Metal Production
Aluminum**

Page 1 of 3 TSD App A

Company Name: Heartland Aluminum
Address City IN Zip: 706 East Ninth Street, Warren, IN 46792
FESOP Significant Permit Revision: 069-16566
Pit ID: 069-00060
Reviewer: NH/EVP

SCC# 3-04-001-01 Sweating Furnace						
TYPE OF MATERIAL	Throughput LBS/HR	1 TON/2000 lbs	TON/HR			
Irony Aluminum	1400	2000	0.7			
	PM lbs/ton Produced	PM10 lbs/ton Produced	SOx lbs/ton Produced	NOx lbs/ton Produced	VOC lbs/ton Produced	CO lbs/tons Produced
	14.5	13.3	3.5	0.6	2.4	--
Potential Emissions lbs/hr	10.15	9.31	2.45	0.42	1.68	--
Potential Emissions lbs/day	243.60	223.44	58.80	10.08	40.32	--
Potential Emissions tons/year	44.46	40.78	10.73	1.84	7.36	--
SCC# 3-04-001-01 Sweating Furnace						
TYPE OF MATERIAL	Afterburner Control Efficiency (PM/PM10)	Throughput LBS/HR	1 TON/2000 lbs	TON/HR		
Irony Aluminum	97.80%	1400	2000	0.7		
	(VOC)					
	90.00%					
	PM lbs/ton Produced	PM10 lbs/ton Produced	SOx lbs/ton Produced	NOx lbs/ton Produced	VOC lbs/ton Produced	CO lbs/tons Produced
	14.5	13.3	3.50	0.60	2.40	--
Potential Emissions lbs/hr	0.22	0.20	2.45	0.42	0.04	--
Potential Emissions lbs/day	5.36	4.92	58.80	10.08	1.01	--
Potential Emissions tons/year	0.98	0.90	10.73	1.84	0.18	--

326 IAC 6-3-2 Compliance Determinations

The allowable PM emission rate pursuant to 326 IAC 6-3-2(e), Process Operations, for weight rates up to 60,000 lb/hr is determined using the following formula:

$E = 4.1 * P^{0.67}$ where:
E = allowable PM emission rate (lb/hr)
P = process weight rate (tons/hr)

Emissions Unit	326 IAC 6-3-2 Process Weight Rate tons/hr	Particulate Matter Emission Rate (lb/hr) Potential lb/hr	Controlled Potential lb/hr	Allowable lb/hr
AS 2002	0.7	10.15	0.22	3.23

* Note: PM and PM10 Emission factor is from FIRE version 6.23. SOx, NOx and VOC emission factors are from AIRS, March 1990 Edition.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Heartland Aluminum, Inc.
Address City IN Zip: 706 East Ninth Street, Warren, IN 46792
FESOP Significant Permit Revision: 069-16566
Plt ID: 069-00060
Reviewer: NH/EVP

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

4.5

39.4

Heat Input Capacity includes:

Sweating furnace consisting of 2.0 MMBtu/hr and 1.5 MMBtu/hr primary & secondary chambers, respectively, & 1.0 MMBtu/hr thermal afterburner

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.04	0.15	0.01	1.97	0.11	1.66

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: Heartland Aluminum, Inc.
Address City IN Zip: 706 East Ninth Street, Warren, IN 46792
FESOP Significant Permit Revision: 069-16566
Plt ID: 069-00060
Reviewer: NH/EVP

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.139E-05	2.365E-05	1.478E-03	3.548E-02	6.701E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	9.855E-06	2.168E-05	2.759E-05	7.490E-06	4.139E-05

Methodology is the same as page 2.